ThinkPad® T420 4180 (Optimus)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	IEEE 1394	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4180-MMU	i7-2620M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205[28]	WWAN upg	1394		Finger	Blue	***9***	vPro	G	Pro 64
4180-65U	i5-2540M	2GBx2	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	1394		Finger	Blue	***9***	vPro	G	Pro 64
4180-64U	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	1394			Blue	6	vPro	G	Pro 64
4180-NEU	i5-2540M	4GBx1	14.0" HD		320G 7200	Intel 6205	WWAN upg	1394	Smart			6	vPro		Pro 64
4180-PRU	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	1394		Finger	Blue	***9***	vPro		Pro 64

- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* **14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA NVS™ 4200M**, PCI Express® x16, **1GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm
Weight[2]	*4-cell:* from 4.65 lb (2.11kg); *6-cell:* from 4.84 lb (2.20kg); *9-cell:* from 5.22 lb (2.37kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Carbon-Fiber Reinforced Plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
Battery - life[10]	*6-cell:* up to 9.0 hr; *9-cell:* up to 15.0 hr; *9-cell plus Slice battery:* up to 30.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card read	*Some:* Smart Card reader
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
IEEE 1394	IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420 sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced February 22 or November 1, 2011

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